

NEW RECORDS OF NEARCTIC *SIALIS* (MEGALOPTERA: SIALIDAE), WITH EMPHASIS ON MISSISSIPPI FAUNA¹

Bill P. Stark², Paul K. Lago³

ABSTRACT: New distributional data are presented for 11 Nearctic *Sialis* species. Six of these, including four from Mississippi, represent new state records. Male genitalia of five and female genitalia of three Mississippi species are illustrated.

A recent study by Tarter et al. (1978) included the first published reports of *Sialis* (*S. vagans* Ross) in Mississippi. In this paper we report the occurrence of four additional species [*S. americana* (Rambur), *S. glabella* Ross, *S. iola* Ross and *S. mohri* Ross] in the state; male genitalia for each species and female terminalia for *S. americana*, *S. mohri* and *S. vagans* are illustrated to aid in species recognition. Unreported records of six additional species are listed from six other states. Two of these, *S. infumata* Newman (Oklahoma) and *S. velata* Ross (Idaho), represent new state records.

The following abbreviations indicate collections in which specimens studied are deposited: BM-Bryant Mather Collection, Clinton, MS.; BPS-Bill P. Stark Collection; UM-University of Mississippi; UU-University of Utah.

MISSISSIPPI RECORDS

Sialis americana (Rambur) (Figs. 1, 2, 12)

Males are distinguished by an elongate bifid genital plate which is apically truncate in lateral view. The terminal plate is emarginate caudally and appears to show some variation from illustrations in Ross (1937). The female eighth sternum is rectangular and bears a mesal depression.

Material examined. — Adams Co., Natchez, 22-V-1978, P. Lago, 1♀(UM). Hinds Co., Clinton, 20-V-1977, B. Stark, 1♀(BPS). Lafayette Co., Oxford, 19-V-1977, S. Hurdle, 1♂(UM); 2-VI-1977, S. Hurdle, 1♂(UM); 30-V-1978, P. Lago, 5♂11♀(UM); 5-VII-1978, D. Stanford, 1♀(UM).

Comments. — Widely distributed but known from few specimens. Tarter et al. (1978) reported *americana* in adjacent Louisiana.

¹Received May 24, 1980.

²Biology Department, Mississippi College, Clinton, MS 39058.

³Department of Biology, University of Mississippi, University, MS 38677.

***Sialis glabella* Ross (Figs. 3, 4)**

Males are most similar to *americana* but are readily distinguished by lateral and dorsal aspect of the genital plate. The apex of the *glabella* genital plate is rounded rather than truncate in lateral view and the arms of the genital plate are broader distally in dorsal view than in *americana*. No females were available for study.

Material examined. — *Adams Co.*, Natchez, 13-V-1977, A. Zuccaro, 1♂(UM).

Comments. — Previously known only from Illinois (Ross, 1937).

***Sialis iola* Ross (Figs. 5, 6)**

Males are distinguished by the relatively smaller genital plate which bears a few fine setae and which is apically hooked in lateral aspect. Dorsally the genital plate has sinuate lateral margins and the bifid tips are acute apically. The single female examined has mesal notches on the posterior margins of sterna 7 and 8.

Material examined. — *Marshall Co.*, 28-IV-1978, D. Standord, 1♂(UM). *Tishomingo Co.*, 12-V-1973, 4 mi E Iuka, C. Bryson, 1♀(BM).

Comments. — Previously known from Atlantic Coastal states from Maine to South Carolina along with Ohio and New Hampshire (Tarter et al., 1978).

***Sialis mohri* Ross (Figs. 9, 10)**

Males are distinguished by long curved arms of the terminal plate and long narrow lobes of the genital plate; the terminal plate arms have an apical spine and sparse dorsal setae. The female eighth sternum bears 2 lateral sclerites and a small mesal sclerite.

Material examined. — *Hinds Co.*, Jackson, 28-III-1980, T. Dent, 1♂(BPS); 6 mi. w. Raymond, 8-IV-1980, B. Stark, 1♂1♀(BPS). *Lafayette Co.*, Puskus Lake, 31-III-1977, P. Lago, M. McEwen and E. Zuccaro, 16♂13♀(UM); 23-IV-1979, R. Goodwin, 1♀(UM); T75-R2W-Sec. 34, 17-IV-1980, P. Lago and M. Mann, 10♂6♀(UM).

Comments. — Widely distributed and common in eastern North America and previously reported in adjacent Arkansas and Tennessee (Tarter et al., 1978).

***Sialis vagans* Ross (Figs. 7, 8, 11)**

Males are distinguished by the ventral extension of sternum 9 over the genitalia. The genital plate is broad basally and acute apically in lateral aspect; dorsally the plate is notched apically and lateral margins are sinuate. The female eighth sternum is almost divided by a constriction in the mesal depression.

Material examined. — *Amite Co.*, East Fk. Amite Riv., 29-III-1978, B. Stark, 1♀(BPS); 7 mi E Smithdale, 17-III-1977, B. Stark, 3♂1♀(BPS). *Green Co.*, 3.5 mi. S. McLain, 7-IV-1979, P. Lago, 1♀(UM). *Lafayette Co.*, Oxford, 7-IV-1977, S. Hurdle, D. Stanford and A. Zuccaro, 9♂11♀(UM); 13-IV-1978, M. Mann, 1♂10♀(UM); 17-IV-1978, D. Stanford, 1♂, blacklight trap (UM); 3-IV-1979, D. Stanford, 1♂(UM); 26-IV-1979, D. Massey, 2♂(UM); 9 mi. NE Oxford, 19-IV-1979, D. Massey, 2♀(UM). *Lincoln Co.*, 7 mi. N Summit, 25-III-1977, B. Stark, 10♂5♀(BPS); 29-III-1978, B. Stark, 8♂11♀(BPS); 7-IV-1979, B. Stark, 1♂(BPS). *Rankin Co.*, Pearl, 17-IV-1971, B. Mather, 1♀(BM). *Stone Co.*, 13 mi. SE Wiggins, 6-IV-1979, P. Lago, 2♂4♀(UM).

Comments. — Amite and Lincoln county records given here for *vagans* were previously reported by Tarter et al. (1978).

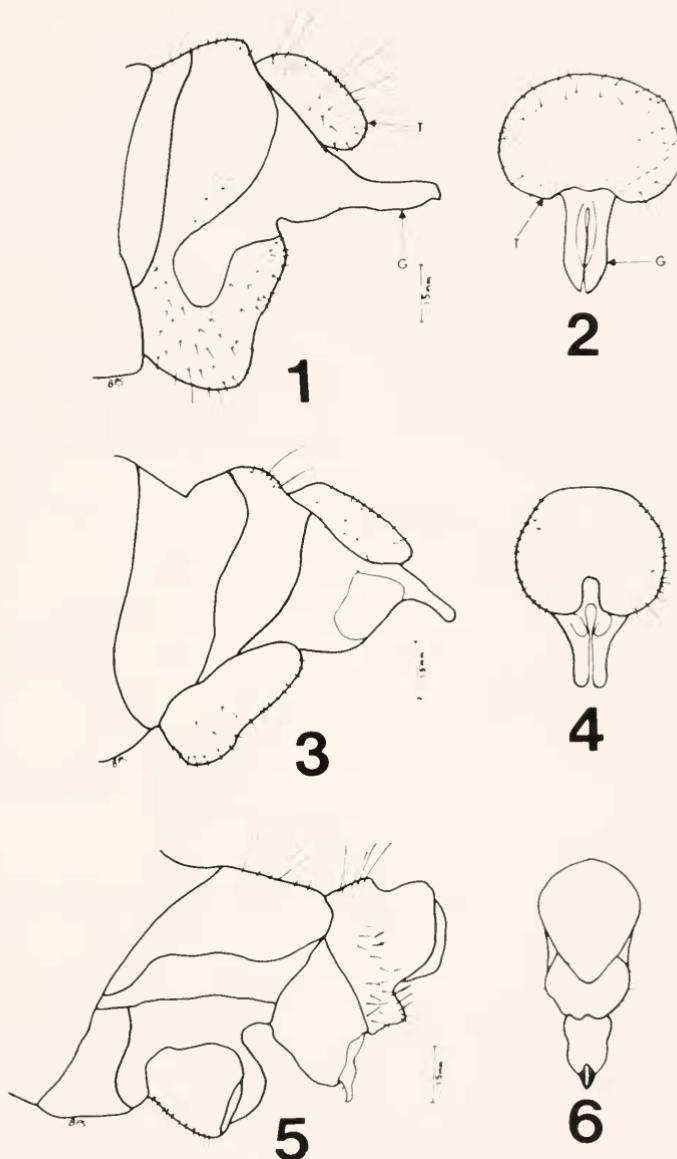


Fig. 1. *Sialis americana*, ♂ terminalia, lateral. **Fig. 2.** *S. americana*, ♂ terminal and genital plates, ventral. **Fig. 3.** *S. glabella*, ♂ terminalia, lateral. **Fig. 4.** *S. glabella*, ♂ terminal and genital plates, Ventral. **Fig. 5.** *S. iola*, ♂ terminalia, lateral. **Fig. 6.** *S. iola*, ♂ terminal and genital plates, ventral.

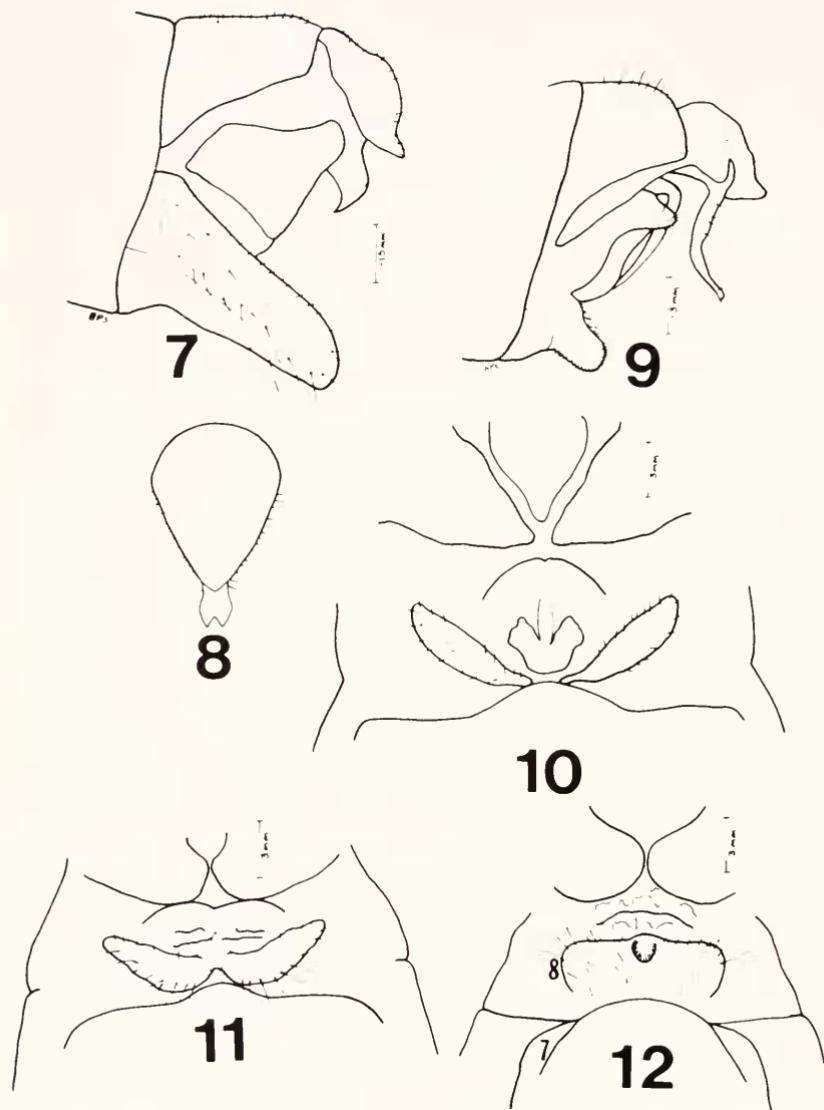


Fig. 7. *S. vagans*, ♂ terminalia, lateral. Fig. 8. *S. vagans*, ♂ terminal and genital plates, ventral. Fig. 9. *S. mohri*, ♂ terminalia, lateral. Fig. 10. *S. mohri*, ♀ terminalia, ventral. Fig. 11. *S. vagans*, ♀ terminalia, ventral. Fig. 12. *S. americana*, ♀ terminalia, ventral.

ADDITIONAL RECORDS OF NEARCTIC *SIALIS****Sialis californica* Banks**

Material examined. — Oregon: *Douglas Co.*, Muir Crk., Hwy 230, 10-VII-1979, B. Stark & K. Stewart, 1♂(BPS). Washington: *Pierce Co.*, Chamber's Lake, Ft. Lewis, 25-V-1970, B. Stark, 1♀(BPS).

***Sialis hamata* Ross**

Material examined. — Wyoming: Grand Teton Natl. Pk., Gros Ventre Riv., 7 mi N Jackson, 28-VI-1964, S. Jensen & J. Richardson, 1♂(UU).

***Sialis hasta* Ross**

Material examined. — Missouri: *Greene Co.*, Pearson Crk., Springfield, 21-IV-1979, B. Stark, K. Stewart & S. Szczytko, 1♂1♀(BPS).

***Sialis infumata* Newman**

Material examined. — Oklahoma: *Pittsburg Co.*, Brushy Crk., Haileyville, 8-IV-1971, 1♂(BPS).

***Sialis occidens* Banks**

Material examined. — California: *Plumas Co.*, Gold Lake outfall, 5-VII-1979, B. Stark & K. Stewart, 1♂4♀(BPS).

***Sialis velata* Ross**

Material examined. — Idaho: *Bannock Co.*, Portneuf Riv., 9 mi N Lava Hot Springs, 20-VI-1964, S. Jensen & J. Richardson, 1♂(UU).

ACKNOWLEDGMENTS

We are grateful to Dr. K. W. Stewart, North Texas State University, and Dr. R. W. Baumann, Brigham Young University, for helpful comments made during their review of this manuscript.

LITERATURE CITED

- Ross, H.H. 1937. Studies of Nearctic aquatic insects. I. Nearctic alderflies of the genus *Sialis* (Megaloptera, Sialidae). Bull. Ill. Natur. Hist. Surv. 21:57-78.
Tarter, D.C., W.W. Watkins, D.L. Ashley and J.T. Goodwin. 1978. New state records and seasonal emergence patterns of alderflies east of the Rocky Mountains (Megaloptera: Sialidae). Entomol. News 89: 231-234.